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September 16, 1998

Ms. Magalie Roman Salas, Secretary  
Federal Communications Commission  
1919 M Street NW Room 222  
Washington DC 20554

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SEP 16 1998

In the Matter of:

Telephone Number Portability )

CC Docket No. 95-116 )

Dear Ms. Salas,

Enclosed are an original and nine copies plus two additional public copies of the Reply Comments of Cincinnati Bell Telephone Company in the above referenced proceeding. A duplicate original copy of this letter and attached Reply Comments is also provided. Please date stamp the duplicate original as acknowledgment of its receipt and return it. Questions regarding these Reply Comments may be directed to Patricia Rupich at the above address or by telephone on (513) 397-6671.

Sincerely,

*David L. Meier*  
David L. Meier

Enclosure

cc: Kathryn Brown  
Jane Jackson  
Neil Fried  
International Transcription Services, Inc.

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SEP 16 1998

Before the  
**FEDERAL COMMUNICATIONS COMMISSION**  
Washington, D.C. 20554

In the Matter of Telephone  
Number Portability

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)

CC Docket No. 95-116

**REPLY COMMENTS OF CINCINNATI BELL TELEPHONE COMPANY**

**I. INTRODUCTION**

CBT, an independent, mid-size local exchange carrier submits these reply comments in response to comments filed on August 3, 1998 in the above-referenced proceeding. The initial comments address the apportionment of joint costs carriers incur in implementing local number portability ("LNP").<sup>1</sup> The comments clearly demonstrate that it is not feasible to develop a uniform method for apportioning the joint costs incurred as a result of LNP.

**II. DISCUSSION**

**A. Joint Cost Apportionment Must Be Company-Specific**

Six ILECs<sup>2</sup> and AT&T Corp. ("AT&T") filed comments in response to the LNP Cost Recovery Order's request for proposals on ways to apportion different types of joint costs. None of these commenters proposes a uniform method for apportioning joint

<sup>1</sup> In the Matter of Telephone Number Portability, CC Docket No. 95-116, Third Report and Order, FCC 98-82, released May 12, 1998 (hereinafter referred to as the "LNP Cost Recovery Order"), at para. 75.

<sup>2</sup> Ameritech, Bell Atlantic, BellSouth Corporation and BellSouth Telecommunications, Inc. ("BellSouth"), GTE Service Corporation ("GTE"), SBC Communications, Inc. ("SBC"), and U S WEST Communications, Inc. ("U S WEST").

costs. Most of the comments are company-specific as to the types of joint costs that the particular company has incurred to implement LNP. What becomes exceedingly clear upon review of the comments is that the type of joint costs each company has incurred differs depending on the individual company's network design.

CBT submits that not only is it impossible to prescribe a uniform method of apportioning all joint costs, in most instances, it is not even possible to identify consistently for all companies which costs are joint versus those which exclusively benefit LNP. For example, Ameritech indicates that the costs of its link monitoring system are joint costs because they will benefit other non-LNP services.<sup>3</sup> As described more fully in Appendix D of Ameritech's comments, Ameritech decided that rather than simply updating its existing monitoring system to accommodate the additional capacity needs resulting from LNP, it would install an entirely new link monitoring system which replaces the old system. Unlike Ameritech, CBT for example, did not need to replace its entire link monitoring system. Instead, CBT only needed to update its existing link monitoring system by adding the hardware and software to support LNP. The additional monitoring points are required to cover the additional links added to the network, and new software is required to recognize the changes in the SS7 protocol. These costs are clearly incremental to LNP and, as AT&T suggests, they do not support services or functionalities other than LNP.<sup>4</sup> Thus, in CBT's case the entire cost of its new investment in the link monitoring system is recoverable from LNP charges.

The above example is not unique. Other situations abound in which the designation of the costs as exclusive to LNP or not will depend on the individual carrier's

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<sup>3</sup> Ameritech p. 13.

<sup>4</sup> AT&T at pp. 4-5.

network. CBT supports GTE's proposal that each carrier develop its own method of allocating its LNP costs.<sup>5</sup>

**B. SS7 Augmentation Costs Are Fully Recoverable**

In the LNP Cost Recovery Order the Commission concludes that costs incurred for software generics, switch hardware, and OSS, SS7 or AIN upgrades are joint costs.<sup>6</sup> As the comments of Ameritech, Bell Atlantic, BellSouth, SBC and US WEST demonstrate, there are some costs, like generic software upgrades, which are clearly joint costs and their allocation to LNP will vary by company. Costs carriers incur to augment their SS7 networks to accommodate the increased signaling required by LNP, however, should be fully recoverable through the LNP charges. As Bell Atlantic indicates, LNP requires carriers to construct entirely new SS7 transport facilities (i.e., link sets) to connect the LNP database to the SS7 network.<sup>7</sup> There is no question that the costs of these signaling links, because they are in essence dedicated to LNP, are fully recoverable. However, in addition to these new links, LNP also requires carriers to augment their existing SS7 transport facilities to accommodate the increase in traffic resulting from LNP.

The magnitude of the increased signaling load placed on the SS7 networks as a result of LNP necessitates a substantial augmentation of the network. Carriers determine the number of signaling links required for each link set based on the quantity and type of messages they will carry. The implementation of LNP using the LRN architecture requires a database query and response to all interoffice calls to an NXX that is open for

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<sup>5</sup> GTE at pp. 5-6.

<sup>6</sup> LNP Cost Recovery Order at para. 73.

<sup>7</sup> Bell Atlantic at p. 5

porting to determine the destination to which to route the call.<sup>8</sup> The LNP query and response messages use the TCAP portion of the SS7 protocol which are generally much longer than the ISUP messages used for basic call setup or trunk signaling. The LNP database query and response messages combined are 158 bytes, while the basic call setup (which generally consists of five messages) requires about 140 bytes. Thus, for every interoffice call to a NXX opened for portability, the load on the SS7 network increases from 140 bytes per call to 298 bytes per call. This effectively reduces the capacity on each link from 40 calls per second to 18 calls per second. As a result of this reduction in capacity caused by LNP carriers must augment their signaling links in order to maintain the same signaling capacity standards in their networks as before LNP.

As Bell Atlantic observes, although "there is no capacity on such a multi-purposed facility dedicated to number portability, the total capacity of the facility was increased to enable the facility to handle the number portability messages."<sup>9</sup> The costs of adding this additional capacity are fully attributable to LNP and thus, fully recoverable, however, the commenters in this proceeding take two different approaches to assigning the costs of these SS7 augmentations to LNP. Ameritech, Bell Atlantic and U S WEST argue that these costs are directly attributable to LNP, and therefore, no apportionment is necessary. BellSouth and SBC on the other hand call these costs joint costs and apportion them to LNP. CBT submits that it makes no difference if these costs are directly assigned to LNP or if they are considered a joint cost. However, if these costs are considered joint costs, CBT concurs with Bell Atlantic<sup>10</sup> that the total cost of the joint

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<sup>8</sup> The industry has settled upon a standard implementation of LNP using the LRN architecture which requires a database query and response for all interoffice calls to an NXX that is open for porting.

<sup>9</sup> Bell Atlantic at pp. 5-6.

<sup>10</sup> Bell Atlantic at p. 6 footnote 10.

use facilities, both newly installed because of LNP and pre-existing, should be apportioned to LNP based on the percentage of that total investment that represents the LNP usage of the facilities. This allocation method versus directly assigning the costs of the new investment to LNP should yield comparable results. As long as the carrier is only adding enough extra capacity to accommodate the increased signaling resulting from LNP, it is entitled to fully recover the costs of the additional signaling links. Any suggestion that only a portion of the costs of the additional links is recoverable must be rejected.

### C. OSS Modifications Directly Attributable to LNP

Ameritech, Bell Atlantic, and BellSouth describe the modifications to their operating support systems in order to accommodate LNP. Although the basics are the same, the exact modifications each must undertake will vary because each company has its own unique OSS. This once again highlights why a single apportionment method is not appropriate for all such costs. However, there is no doubt that the modifications would not have been made but for the ILEC's obligation to implement LNP "without impairment of quality, reliability, or convenience."<sup>11</sup> Existing OSS are designed for a network architecture in which the NXX specifically identifies a single location or switch in the Public Switched Telephone Network. With LNP this is no longer the case. Thus, to implement LNP, virtually every OSS has to be altered or replaced.

- *Pre-ordering/Ordering* - Systems used for pre-ordering and ordering must be modified to allow an NXX to be related to multiple switches within the same rate center in the carrier's network. These changes are required to allow the carrier to properly assign and administer telephone numbers, quote feature availability and schedule due dates. All of these functions were previously done based on the NXX of the telephone number. LECs must also install a Service Order Administration System

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<sup>11</sup> CFR Section 52.21(k) and (p).

(SOA) to provide the gateway between their service order systems and the NPAC.

- *Provisioning* - Systems used for provisioning must be modified to allow an NXX to be related to multiple switches within the same rate center in the carrier's network. These changes are required to allow the provisioning systems to properly direct the order to the appropriate switch. These systems must now route based on LRN, when included, rather than the TN. Installation dispatch systems also need to be modified to group orders requiring dispatch by something other than the NXX of the telephone number (e.g., LRN, serving address, etc.).
- *Billing* - Billing systems must be modified so they can recognize and process new messages that will be generated from the network as a result of installing the LNP software in the switches.
- *Maintenance and Repair* - Maintenance and Repair systems must be modified to recognize when numbers have been ported from their original location. Centralized repair systems that test the subscriber's line must be modified to select the proper switch to access when a number has been ported from its indigenous location. Repair dispatch systems also need to be modified to group trouble tickets requiring dispatch by something other than the NXX of the telephone number (e.g., LRN, serving address, etc.).
- *911 System Changes* - The 911 system requires an upgrade to allow individual numbers, as opposed to blocks based on NXXs, to be "unlocked" and "migrated" to competitive local exchange carriers' control.

Non-LNP services receive no new enhancements from these changes, nor do these changes enable the ILEC to offer new non-LNP services. These OSS changes simply allow all other services to function in the same manner as before implementation of LNP. Without these changes, customers would realize a degradation of service.

### III. CONCLUSION


Based on the comments received in this proceeding, CBT urges the Common Carrier Bureau to act promptly to provide guidance to carriers on the joint cost issue so that carriers will have adequate time to prepare their LNP tariffs before the February 1, 1999 effective date for the end-user charge. CBT contends that based upon the LNP query tariffs that have been filed to date and the comments filed in this proceeding, the

Bureau has sufficient information to determine that a standard apportionment method for joint costs is inappropriate and, as such, should allow each carrier to justify its apportionment method in its tariff filing.

Respectfully submitted,

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Dated: September 16, 1998

CERTIFICATE OF SERVICE

The undersigned hereby certifies that copies of the foregoing Cincinnati Bell Telephone Company's Reply Comments been sent by first class United States Mail, postage prepaid, or by hand delivery, on September 16, 1998, to the persons listed on the attached service list.

  
Judy Pieppieier

\* via hand delivery

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